INDEX

Aeronautics, Cayley's, by C. H. Gibbs-Smith, rev. by P. A. Sheppard, 286
Aether, in the transmission of light, 100, 103
Alizarine, synthesis of, 277
Analysis, Descartes on, 242
Ångström's scale of wave-lengths, 203
Anthony, H. D., rev. of *Mechanical Technology of Greek and Roman Antiquity*, 285
Armitage, A., rev. of *History of Science: An Annual Review* . . . vol. 1, 1962, 187
Astronomy, Greek, and its Debt to the Babylonians, by L. W. Clarke, 65
  Babylonian, 70
  History of (*Istorico-astronomitcheskie Issledovania*), contents of, 391
Atlantic cable, 44

Babylonian astronomy, 70
Bacon, Francis, at the Cross Roads, by B. Farrington (abst.), 79
Badcock, A. W., Physical Optics at the Royal Society, 1600-1800, 99, 183
Balmer's formula for spectral lines of hydrogen, 207
Banks, Sir Joseph, early support for the Royal Institution, 49 ff.
  on relations between the Royal Society and the Geological Society, 330 ff., 348
Bates, , on the mechanism of evolution, 8 ff.
Bescaria, work on phosphorescence, 109
Bell, Alexander Graham, on the telephone, 46
Bernard, Sir Thomas, and the Royal Institution, Plate III, facing p. 55, 57 ff.
'Bettering' Society, 54
Biological Sciences, Encyclopaedia of the, rev. by W. J. Stearn, 188
Boerhaave at Leyden, 147 ff.
Bohr's theory of spectra, 212
Botany in the Seventeenth and Eighteenth Centuries, Influence of Leyden on, by W. T. Stearn, 81 (abst.), 137
Brahe, Tycho, Was [he] as influential as he thought?, by C. Doris Hellman, 295
  acceptance of his planetary system by the Jesuits, 313 ff.
  appraisal by Lalande, 319
  comments by Galileo, 311
  importance of accurate observations, 296, 297
  Kepler's assessment, 298
  observations of the nova of 1572 and the comet of 1577, 298 ff.
  400th anniversary, 322
Bredon, Simon: Physician, Mathematician and Astronomer, by C. H. Talbot, 19
  commentary on the arithmetic of Boethius, 22
  commentary on the *Almagest*, 26
  papers in the Bodleian Library, 20
  Theoretica planetarum, 24
  translation of Ptolemy's *Quadripartitum*, 28
  Trifolium, 21
Buchdahl, Gerd, Relevance of Descartes' Philosophy for Modern Philosophy of Science, 227, 284
Burton, Robert, discussion of astronomical work of Tycho Brahe and Kepler, 310
Butler, F. H. C., obit. of H. Hamshaw Thomas, 280
  retirement as hon. sec. of the British Society for the History of Science, 396

Calvert, H. R., History of Mathematical Computers (abst.), 79
  rev. of *Histoire générale des techniques*, tome 1, 285
  retirement as hon. treasurer of the British Society for the History of Science, 396
Cardwell, D. S. L., C. M. Mellor and, Dyes and Dyeing, 1775-1860, 265, 284
Cartesian philosophy, Newton on, 172 ff.
Cavendish, A Eudiometer supposed to have belonged to, by Kathleen R. Farrar, 375
Cayley's Aeronautics, 1796-1855, by C. H. Gibbs-Smith, rev. by P. A. Sheppard, 286
Chemistry, importance in dyeing, 272
  Language of, Historical Studies in the, by M. D. Crosland, rev. by F. Greenaway, 287
Chromosomes as carriers of heredity, 13
Cinema, development of the, 220
Clarke, L. T., Greek Astronomy and its debt to the Babylonians, 65, 88
Clusius, C., at Leyden, 144 ff.
Colour, of light, 103
  of bodies, 104
Colours, Newton on, 175
Communications, Electrical, British and American Contributions to, by E. A. Marland, 31
Corpuscular theory (of light), 100
Crosland, M. D., *Studies in the Language of Chemistry*, rev. by F. Greenaway, 287
Cytogenetics, beginnings of, 13

Dalton, J., and the supposed Cavendish eudiometer, 378
Darwin, C., Manuscript of *Pangenesis*, by R. C. Olby, 251, 253
Davy, E., invention of the electrical relay, 41
Davy, Sir Humphry, and Cavendish's apparatus, 376 ff.
  early meetings with geologists, 327
  opposition to the Geological Society, 343
de Bournon, L., publication of his *Traité . . . introduction à la mineralogie*, 327
Descartes, conception of hypothesis, 239
  knowledge in dynamics, 234
  knowledge in mathematics and physics, 230
  on analysis, 242
Descartes's Philosophy, Relevance of, for Modern Philosophy of Science, by Gerd Buchdahl, 227
Dewhurst, Kenneth, Prince Rupert as a Scientist, 365, 381

Diffraction, Brougham on, 112
Grimaldi on, 111
Hooke on, 111
Diffraction grating, Fraunhofer, 203
Dingle, H., A Hundred Years of Spectroscopy, 199, 284
rev. of *Physical Science: Men and Concepts*, by G. C. Omer, jr., *et al.*, 386
Drachmann, A. G., *Mechanical Technology of Greek and Roman Antiquity*, rev. by H. D. Anthony, 285
Dutch Society for the History of Science, rep. by E. Ashworth Underwood, 384
Dyes and Dyeing, 1775-1860, by C. M. Mellor and D. S. L. Cordwell, 265
Dyes, use of vegetable, 266
synthetic, 275 ff.
Dynamics, Descartes on knowledge in, 234

Education, lack of science in, 224
Edwardian Science and Technology, by A. R. Ubbelohde, 217
Electrical Communications, British and American Contributions to, by E. A. Marland, 31
Equality and Inequality, Role of, in the History of Mathematics, by R. C. H. Tanner, 159
Eudiometer, supposed to have belonged to Henry Cavendish, by Kathleen R. Farrar, 375

Farrar, Kathleen R., a Eudiometer supposed to have belonged to Henry Cavendish, 375, 381
Farrington, B., Francis Bacon at the Cross Roads (abstr.), 79
Fowler, A., work in spectroscopy, 210, 213 ff.
Fraunhofer, first diffraction grating, 203

Gale, Leonard, work with Morse, 42
Galileo, discussion of Tycho Brahe's planetary system, 311
Galton, influence on genetics, 8 ff.
Gassendist philosophy, Newton on, 172 ff.
Geological Dinner Club, 328
Geological Inquiries, 334, 336, 338 ff.
Geological Society of London, Foundation of, by M. J. S. Rudwick, 325
collections, 343
co-operative research, 333, 341
Geological Inquiries, 334, 336, 338 ff.
influence of G. B. Greenough, 325 ff.
membership policy, 336
origin of the Geological Dinner Club, 328
publication of papers, 333, 342, 352
purposes of, and first officers, 329
relations with the Royal Society, 330 ff.
relations with W. Smith, 339
Gibbs-Smith, C. H., *Sir George Cayley's Aeronautics*, 1796-1855, rev. by P. A. Sheppard, 286
Globes, celestial, of the seventeenth century, 306
Gnomon, use in Babylon, 75
Greek and Roman Antiquity, Mechanical Technology of, by A. G. Drachmann, rev. by H. D. Anthony, 285
Greenaway, F., rev. of *Historical Studies in the Language of Chemistry*, by M. D. Crosland, 287
Greenough, G. B., Geological Tour of Scotland in 1805, by M. J. S. Rudwick, 117
comments on Huttonian views, 125, 131 ff.
comments on Wernerian views, 124, 126, 129, 134
and Hall's experiment, 122, 130, 133
formation of dykes, 126 ff., 134
Parallel Roads of Glen Roy, 130 ff.
president of the Geological Society, 325
Greville, Charles, patron of the Geological Society, 329
Gunpowder, improvement of, by Prince Rupert, 367

Haddow, Alex., rev. of *Short History of Medicine*, by C. Singer and E. Ashworth Underwood, 385
Haller at Leyden, 151
Harriot, T., *Artis analytica*, 159, 166, 168
Hellman, C. Doris, Was Tycho Brahe as influential as he thought?, 295, 381
Henry, work on the telegraph, 39
Histoire générale des techniques, tome 1, rev. by H. R. Calvert, 285
History of Astronomy (*Istorico-astronomitcheskie Isseldovania*), contents of, 391
History of Mathematics, Seventh Colloquium on the (rep. by J. E. Hofmann), 184
Eighth Colloquium on the (rep. by C. J. Scriba), 382
History of Medicine, Short, by C. Singer and E. Ashworth Underwood, rev. by Alex. Haddow, 285
History of Science, vol. 1, rev. by A. Armitage, 187
Dutch Society for the, rep. by E. Ashworth Underwood, 384
Tenth International Congress on the (rep.), 186
Hofmann, J. E., rep. on Seventh Colloquium on the History of Mathmatics, 184
Hooke, light as a vibration, 102
work on diffraction, 111
Hutton and Werner compared: George Greenough's Geological Tour of Scotland in 1805, by M. J. S. Rudwick, 117
Huygens, light as a vibration, 102
work on diffraction, 111
work on interference, 114
Hypothesis, Descartes's concept of, 239

Inequality signs, first use of, 166
Interference (of light), 114

Jesuits, acceptance of Tycho Brahe's planetary system, 313 ff.
Johannsen, work on the pure line or strain, 13, 17

Kepler, appraisal of Tycho Brahe, 298

Kirchhoff, identity of emission and absorption spectral lines, 201
Knight, G., work on light, 102
Knowles, H. L., *et al.*, *Physical Science: Men and Concepts*, rev. by H. Dingle, 386

Lalande, appraisal of Tycho Brahe and Kepler, 319
Language of Chemistry, Historical Studies in the, by M. D. Crosland, rev. by F. Greenaway, 287
Lee, James, and the Vineyard Nursery, Hammersmith, by Eleanor J. Wilson, rev. by W. T. Stearn, 89
Lettsom, J. C., at Leyden, 153, 156
Leyden, Influence of, on Botany in the Seventeenth and Eighteenth Centuries, by W. T. Stearn, 81 (abst.), 137
  Boerhaave, 147
  Botanic Gardens, 144 ff.
  foreign students, 143
  Haller, 151
  Lettsom, J. C., 153, 156
  Linnaeus, 153; publication of *Systema naturae* and *Genera plantarum*, 155
  religious tolerance in the University of, 138
Light, colour of, 104
  corpuscular theory of, 100
  diffraction, 111
  Hooke, light as a vibration, 102
  Huygens, light as a vibration, 102
  interaction with matter, 107
  interference, 114
  Knight, G., work on, 102
  Newton's papers on, 100 ff.
  velocity of, 105
  wave and pulse theories, 101
Lind, J., *Treatise of the Scurvy*, 357
  experiment on dietetics, 360
Linnaeus at Leyden, 153 ff.
  publication of *Systema naturae* and *Genera plantarum*, 155
Lloyd, C. C., Conquest of Scurvy, 357, 381
Lockyer, Sir Norman, work on line spectra, 206 ff.

Malaria, control of, 222
Marland, E. A., British and American Contributions to Electrical Communications, 31, 88
Martin, T., Origins of the Royal Institution, 49, 88
Mathematical Computors, History of, by H. R. Calvert (abst.), 79
Mathematics, Descartes on knowledge in, 230
  History of, Role of Equality and Inequality in the, by R. C. H. Tanner, 159
  Eighth Colloquium on the History of, rep. by C. J. Scriba, 382
  Seventh Colloquium on the History of, rep. by J. E. Hofmann, 184
Matter, Newton on, 174, 180
Mechanical Technology of Greek and Roman Antiquity, by A. G. Drachmann, rev. by H. D. Anthony, 285
Medical training and botany at Leyden, 146
Medicine, Short History of, by C. Singer and E. Ashworth Underwood, rev. by Alex. Haddow, 385
Mellor, C. M., and D. S. L. Cardwell, Dyes and Dyeing, 1775-1860, 265, 284
Mendel's work, Reasons for Rediscovery, by J. S. Wilkie, 5
Mezzotinting, improved by Prince Rupert, 366
Morse sounder, 42
Motor-car, development of, 219
Mundy, W., *et al.*, *Physical Science: Men and Concepts*, rev. by H. Dingle, 386
Murexide, discovery of, 275

Newman, J., instrument maker, 376 ff.
Newton, Cartesian philosophy and, 172 ff.
  on colours, 104, 175
  on interference of light, 114
  on light, 100 ff., 174
  on matter, 174, 180
  on tides, 176
  'pocketbooks', 171
  postulation of an aether, 100
  Quaestiones, 171
Newton's Philosophy of Nature, Foundations of, by R. S. Westfall, 171
Nitrogen, fixation of, 222

Olby, R. C., Charles Darwin's Manuscript on Pangenesis, 252, 284
Omer, jr., G. C., *et al.*, *Physical Science: Men and Concepts*, rev. by H. Dingle, 386
Optics, Physical, at the Royal Society, by A. W. Badcock, 99

Pangenesis, Darwin's manuscript of, by R. C. Olby, 252
Perkin, and synthetic dyes, 276 ff.
Philosophy of science, relevance of Descartes's philosophy for, 227
Phosphorescence, 108
Physical Optics at the Royal Society, by A. W. Badcock, 99
Physical Science: Men and Concepts, by G. C. Omer, jr., *et al.*, rev. by H. Dingle, 386
Physics, Descartes on knowledge in, 230
Platter, Felix, Journal of (*Beloved Son Felix*), rev. by W. T. Stearn, 189
Ptolemy, debt to Babylonians, 76

Quantum theory, influence of, 218

Radioactive atomic disintegration, 218
Recorde, R., use of + and −, 163
  use of equals sign, 159, 166
Relativity, influence of, 218
Relay (electrical), invention of, 41
Römer, on the velocity of light, 106
Roman Antiquity, Mechanical Technology of Greek and, by A. G. Drachmann, rev. by H. D. Anthony, 285
Ronalds, Sir Francis, practical telegraph, 33
Rowland's scale of wave-lengths, 203
Royal Institution, Origins of, by T. Martin, 49

Royal Society, Physical Optics at the, by A. W. Badcock, 99
relations with the Geological Society, 330 ff., 341 ff.
Rudwick, M. J. S., Foundation of the Geological Society of London, 325, 381
Hutton and Werner compared: George Greenough's Geological Tour of Scotland in 1805, 117, 183
Rumford, and the Royal Institution, Plate II facing p. 54, 58 ff.
Rupert, Prince, as a Scientist, by Kenneth Dewhurst, 365
Rupert's 'drops', 366
Rydberg constant in spectroscopy, 208

Schumann, work in the ultra-violet, 211
Science, Biological, Encyclopedia of the, rev. by W. T. Stearn, 188
History of, vol. 1, rev. by A. Armitage, 187
History of, Dutch Society for the, rep. by E. Ashworth Underwood, 384
Tenth International Congress on the History of (rep.), 186
Scientific Method in Crime Detection, by K. Simpson (abst.), 80
Scriba, C. J., Eighth Colloquium on the History of Mathematics (rep.), 382
Scurvy, Conquest of, by C. C. Lloyd, 357
Anson's description of, 359
Capt. Cook and treatment of, 359, 361
Sheppard, P. A., rev. of *Sir George Cayley's Aeronautics*, 1796-1855, by C. H. Gibbs-Smith, 286
Simpson, K., Development of Scientific Method in Crime Detection (abst)., 80
Singer, C., and E. Ashworth Underwood, *Short History of Medicine*, rev. by Alex. Haddow, 385
Smith, William, relations with the Geological Society, 339
Solar spectrum, Kirchhoff's map of, 202
Spectroscopy, A Hundred Years of, by H. Dingle, 199
Balmer's formula, 207
Bohr's theory, 212
Fowler's work, 210, 213 ff.
in the ultra-violet, 204, 211
Lockyer's work, 206 ff.
Rydberg constant, 208
Schumann, work in the ultra-violet, 211
use of photography in, 203
Stapleton, H. E., death of, 81
Stearn, W. T., Influence of Leyden on Botany in the Seventeenth and Eighteenth Centuries, 81 (abst.), 137, 183
rev. of *Beloved Son Felix*, 189
rev. of *Encyclopedia of Biological Sciences*, 188
rev. of *James Lee and the Vineyard Nursery*, by Eleanor J. Willson, 89
Stokes, fluorescence due to ultra-violet light, 204

Talbot, C. H., on Simon Bredon (*c.* 1300-1372), 19, 88
Tanner, R. C. H., On the Role of Equality and Inequality in the History of Mathematics, 159, 183
Technology, Mechanical, of Greek and Roman Antiquity, by A. G. Drachmann, rev. by H. D. Anthony, 285
Telegraphy, Cook W. F., 37
Gale, L., 42
Henry, 39
Morse, 40, 42, 44
Ronalds, Sir Francis, 33
Schilling, 36
Schweiger, 36
Sömmering, 36
submarine, 43
use of galvanometer needles, 36
use on railways, 40, 43
Wheatstone, 38
Telegraphy, wireless, development of, 221
Telephone, development of, by A. Graham Bell, 46
Thales, work in astronomy, 65
Thomas, H. Hamshaw, death, 191
portrait, facing p. 199
obituary, by F. H. C. Butler, 280
Tides, Newton on, 176
Tycho, Brahe, see Brahe, Tycho

Ubbelohde, A. R., Edwardian Science and Technology, 217, 284
Underwood, E. Ashworth, Dutch Society for the History of Science (rep.), 384
C. Singer and, *Short History of Medicine*, rev. by Alex. Haddow, 385

Van Beneden, work on fertilization, Plate I facing p. 16
Velocity of light, 105
Vineyard Nursery, Hammersmith, James Lee and the, by Eleanor J. Willson, rev. by W. T. Stearn, 89

Warner, W., editor and publisher of Harriot's *Artis analyticae* . . ., 159, 167
Weismann, theory of heredity, 14
Westfall, R. S., Foundations of Newton's Philosophy of Nature, 171, 183
Wheatstone, work on the telegraph, 38 ff.
Wilkie, J. S., Rediscovery of Mendel's Work, 5, 86
Willson, Eleanor J., *James Lee and the Vineyard Nursery, Hammersmith*, rev. by W. T. Stearn, 89

Yoho, W. H., *et al.*, *Physical Science: Men and Concepts*, rev. by H. Dingle, 386